CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

TENTATIVE MONITORING AND REPORTING PROGRAM NO. R9-2004-0111 FOR

SWEETWATER AUTHORITY
LOWER SWEETWATER RIVER BASIN
GROUNDWATER DEMINERALIZATION PLANT

SAN DIEGO COUNTY

A. MONITORING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in Order No. R9-2004-0111 or in this monitoring and reporting program and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of this Regional Board.

2. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:

   a. "A Guide to Methods and Standards for the Measurement of Water Flow," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)

   b. "Water Measurement Manual," U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)

   c. "Flow Measurement in Open Channels and Closed Conduits," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical

Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

d. "NPDES Compliance Sampling Manual," U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)

3. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved under Title 40, United States Code of Federal Regulations (CFR), Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act* as amended, unless other test procedures are specified in Order No. R9-2004-0111 and/or in this Monitoring and Reporting Program and/or by this Regional Board.

4. Monitoring results must be reported on forms approved by this Regional Board. Duplicate copies of the monitoring reports signed and certified as required by Reporting Requirement F.12 of Order No. R9-2004-0111 must be submitted to the USEPA and the Regional Board at the addresses listed in Reporting Requirement F.14 of Order No. R9-2004-0111.

5. If the discharger monitors any pollutant more frequently than required by Order No. R9-2004-0111 or by this monitoring and reporting program, using test procedures approved under 40 CFR Part 136, or as specified in Order No. R9-2004-0111 or this Monitoring and Reporting Program or by this Regional Board, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharger's monitoring report. The increased frequency of monitoring shall also be reported.

6. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by Order No. R9-2004-0111 and this monitoring and reporting program, and records of all data used to complete the application for Order No. R9-2004-0111, for a period of at least five years from the date of the sample, measurement, report, or application. This period may be extended by request of this Regional Board at any time.

7. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in Order No. R9-2004-0111 or this Monitoring and Reporting Program.

8. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by this Regional Board.

9. The discharger shall report all instances of noncompliance not reported under Reporting Requirement F.5 of Order No. R9-2004-0111 at the time monitoring reports are

submitted. The reports shall contain the information listed in Reporting Requirement F.5.

10. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurements;
    b. The individual(s) who performed the sampling or measurements;
    c. The date(s) analyses were performed;
    d. The individual(s) who performed the analyses;
    e. The analytical techniques or methods used; and
    f. The results of such analyses.

11. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

12. Monitoring results shall be reported at intervals and in a manner specified in Order No. R9-2004-0111 or in this Monitoring and Reporting Program.

13. This monitoring program may be modified by this Regional Board, as appropriate.

B. EFFLUENT MONITORING

1. Effluent monitoring for brine concentrate shall be conducted at the discharge point to the Upper Paradise Creek Flood Control Channel, outfall 009, and shall be conducted as noted in *Table 1. Effluent Monitoring Requirements for Reverse Osmosis Brine Concentrate Discharge*.

Table 1. Effluent Monitoring Requirements for Reverse Osmosis Brine Concentrate Discharge.

Constituent	Units	Effluent Limitation	Sample type	Analysis Frequency	Reporting Frequency
Flowrate	mgd	--	--	Daily	Quarterly
Salinity	ppt	--	Grab	Monthly	Quarterly
pH	units	Within the limits of 6.0 and 9.0 at all times	Grab	Monthly	Quarterly
Settleable solids	ml/L	--	Grab	Monthly	Quarterly
Total suspended solids	mg/L	--	Grab	Monthly	Quarterly
Nitrate (as N)	mg/L	5.0	Grab	Monthly	Quarterly
Total phosphorus	mg/L	--	Grab	Monthly	Quarterly
Orthophosporous	mg/L	--	Grab	Monthly	Quarterly

Constituent	Units	Effluent Limitation	Sample type	Analysis Frequency	Reporting Frequency
Copper	µg/L	3.73	Composite	Quarterly	Quarterly
Arsenic	µg/L	--	Composite	Quarterly	Quarterly
Zinc	µg/L	--	Composite	Quarterly	Quarterly
Selenium	µg/L	--	Composite	Quarterly	Quarterly

Note: mgd = million gallons per day ppt = parts per thousand ml/L = milliliters per liter
mg/L = milligrams per liter µg/l = micrograms per liter

2. Effluent monitoring shall be conducted at the respective discharge points for the discharges of groundwater well-purge water and pressure (air) relief valves as noted in *Table 2. Effluent Monitoring Requirements for Groundwater Well-purge Water, Pressure (Air) Relief Valves, and Plant Feed-water Dump*.

Table 2. Effluent Monitoring Requirements for Groundwater Well-purge Water, Pressure (Air) Relief Valves, and Plant Feed-water Dump.

Constituent	Units	Effluent Limitation	Sample type	Analysis Frequency	Reporting Frequency
Flowrate	mgd	--	--	**	Quarterly
pH	units	Within the limits of 6.0 and 9.0 at all times	Grab	**	Quarterly
Duration of discharge	minutes	--	--	**	Quarterly
Date of discharge	mm/dd/yy	--	--	**	Quarterly
Copper	µg/L	--	Grab	Quarterly	Quarterly
Arsenic	µg/L	--	Grab	Quarterly	Quarterly
Zinc	µg/L	--	Grab	Quarterly	Quarterly
Selenium	µg/L	--	Grab	Quarterly	Quarterly

** Whenever the discharge occurs.

3. Each groundwater well discharge location shall be qualitatively evaluated each quarter and reported quarterly. The qualitative evaluation shall include a narrative description of any erosion, sediment deposition, or other impacts to vegetation or wildlife in the vicinity of the respective discharge.

4. Effluent monitoring shall be conducted at the respective discharge points for the discharges of chlorine contact-tank overflow and shall be conducted as noted in *Table 3. Effluent Monitoring Requirements for Chlorine Contact-tank Overflow*.

Table 3. Effluent Monitoring Requirements for Chlorine Contact-tank Overflow.

Constituent	Units	Effluent Limitation	Sample type	Analysis Frequency	Reporting Frequency
Flowrate	mgd	--	--	**	Quarterly
Chlorine Residual	mg/L	0	Grab	**	Quarterly
pH	units	Within the limits of 6.0 and 9.0 at all times	Grab	**	Quarterly
Duration of discharge	minutes	--	--	**	Quarterly
Date of discharge	mm/dd/yy	--	--	**	Quarterly
Copper	µg/L	--	Grab	Quarterly	Quarterly
Arsenic	µg/L	--	Grab	Quarterly	Quarterly
Zinc	µg/L	--	Grab	Quarterly	Quarterly
Selenium	µg/L	--	Grab	Quarterly	Quarterly

** Whenever the discharge occurs.

C. RECEIVING WATER MONITORING

The discharger shall implement, as necessary, the monitoring and reporting program in *Section 3, Downstream Monitoring*, and *Section 5, Summary of Monitoring Program in Demineralization Facility Production Adjustment* of the *Lower Sweetwater River Basin Groundwater Demineralization Project, Mitigation and Monitoring Program*, (MMP) prepared by Sweetwater Authority and U.S.D.I. Bureau of Reclamation, May 16, 1997, as revised through July 1998. See *Attachment A*, *Lower Sweetwater River Basin Groundwater Demineralization Project, Mitigation and Monitoring Program*, prepared by the Sweetwater Authority and U.S.D.I. Bureau of Reclamation, May 16, 1997 as revised through July 1998.

a. The discharger shall evaluate the data collected pursuant to the MMP in an expedient manner after each sampling event and report quarterly to the Regional Board the results of such an evaluation.

b. Indications that the discharge has caused an exceedence of the threshold limits for nitrates or impacts to downstream beneficial uses shall be reported as specified in *Provision E.2.* of *Order No. R9-2004-0111*.

c. The MMP shall include one (1) water quality sampling point within 50 meters upstream of the discharge point in the Upper Paradise Creek Flood Control Channel. If this sampling point does not have a flow during the sampling period, the discharger shall state so in the monitoring report data.

d. The MMP monitoring shall include the following water quality constituents:
   (1) Total Dissolved Solids (salinity),

(2) Total Kjeldahl Nitrogen (TKN),
(3) Nitrate (as N),
(4) Chlorophyll A (µg/l),
(5) Total Phosphorus (mg/l), and
(6) Orthophosphate (mg/l).

D. ANNUAL SUMMARY REPORT

The discharger shall submit an annual tabular and graphical summary of the data collect for this monitoring program including the MMP.

E. MONITORING AND REPORTING SCHEDULE

Monitoring reports shall be submitted to this Regional Board according to the dates in *Table 4. Monitoring and Reporting Schedule*.

Table 4. Monitoring and Reporting Schedule.

Reporting Frequency	Report Period	Report Due
Quarterly	January through March	May 1
Quarterly	April through June	August 1
Quarterly	July through September	November 1
Quarterly	October through December	February 1
Annually	January through December	February 1

F. ENDNOTE REFERENCES

1. A grab sample is defined as an individual sample of at least 100 milliliters collected over a period not exceeding 15 minutes. Grab samples shall be collected over a shorter period if necessary to ensure that the constituent/parameter concentration in the sample is the same as that at the sampling location at the time the sample is collected.

2. A composite sample is defined as a combination of at least eight sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

Ordered by _____tentative_____
JOHN H. ROBERTUS
Executive Officer

Date: June 9, 2004